NUS CORPORATION
992 OLD EAGLE SCHOOL ROAD
SUITE 916
WAYNE, PENNSYLVANIA 19087
(215) 687-9510

1E

115883

September 16, 1985
C-585-9-5-21
68-01-6699

Mr. Harold Byer
U.S. Environmental Protection Agency
841 Chestnut Building
Ninth and Chestnut Streets
Philadelphia, PA 19107

Subject: Sampling Plan
TDD No. F3-8506-21
Occidental Chemical
Lower Pottsgrove, Pennsylvania

Dear Mr. Byer:

The site inspection for the subject site has been tentatively scheduled for Wednesday, September 25, 1985. A request for site access was made via correspondence sent to Mr. Joseph King, manager of environmental compliance for the Occidental Chemical Corporation. Mr. King is on vacation until September 16, 1985; therefore, the letter was sent in care of Mr. Luke Lukowiac.

Summary

The site consist of an inactive, 17-acre landfill; an active, 7-acre landfill; 4 inactive, unlined lagoons; and 2 active, lined lagoons all within the confines of the Occidental Chemical Corporation's 250-acre chemical plant located in Pottstown, Pennsylvania.

This facility was owned and operated by the Firestone Tire and Rubber Company (FTRC) from 1945 until 1980 when it was sold to the current owner, Occidental Chemical Corporation. FTRC manufactured both tires and polyvinyl chloride (PVC). While they were in operation, they landfilled tires, rubber, refinery wastes, pigments, zinc oxide, sulfur dioxide, scrubber wastes, and PVC sludge resins. An average of 33 tons of refuse were landfilled each day. The 4 unlined lagoons were periodically dredged and the resulting material was placed in the landfill.

The Occidental Chemical Corporation operates only the PVC manufacturing portion of the plant. A closure plan for the inactive landfill has been approved and is currently under way. The active landfill receives primarily the solids that are filtered out of the process wastewater.

The Occidental Chemical Corporation experienced a trichloroethene (TCE) spill in July 1984, in the vicinity of process water well no. 8. High levels of the TCE were observed in well no. 8. The plume extended toward process water well nos. 5 and 10. The Occidental Chemical Corporation agreed to drill corings, excavate the contaminated soil, pump well nos. 5, 8, and 10, and test the wells periodically. The company is phasing out the use of TCE at this facility.

Drinking Water Supply

The Pottstown Borough Water Works (PBWW) supplies drinking water to Occidental Chemical and the surrounding areas north of the Schuylkill River. According to Mr. Kane, of the PBWW, there are 3 surface intakes located on the Schuylkill River upstream from the site in the town of Stowe, Pennsylvania. This system supplies an estimated 10,000 customers. There are private wells in Montgomery County; however, no known wells lie within 1 mile north of the site.

The residents of East Coventry Township, south of the site and across the river, are all on private water. A preliminary assessment conducted by the state of Pennsylvania indicates that there are 10 domestic wells within 1/4 mile of the site.

Groundwater Information

The Occidental Chemical site is located on the flood plain of the Schuylkill River. The alluvial sands, silts, and gravels of the flood plain contain groundwater. The level of the groundwater fluctuates with changes in the stage of the Schuylkill River.

A second, interrelated groundwater system is found within the shale, siltstone, and bedrock underlying the alluvium. The shallower groundwater system of the alluvium provides recharge to the bedrock groundwater system. The flow within the bedrock occurs along joints and bedding planes; intersecting joints and secondary openings store and transmit groundwater within the bedrock.

Depth to groundwater ranges from 1 to 9 feet. The flow direction is expected to be toward the Schuylkill River. The water table is reported to be relatively flat, thereby allowing for only a slow movement of groundwater. It was noted in a report by Martin and Martin, consultants to Occidental Chemical, that pumpage of adjacent deep wells affects groundwater flow in both the deep and the shallow aquifers.

Geology Information

The site lies within the Lowland section of the Piedmont Physiographic Province. The site itself occupies an alluvial terrance, which is 20 to 25 feet thick. The alluvium consists of thin layers of silt, sand, and gravel.

Underlying the alluvium are the Triassic age Lockatong and Brunswick Formations. These formations reportedly dip approximately 30 degrees toward the southeast.

The Lockatong Formation consists of dark gray to black, thick bedded argillite with zones of thin bedded black shale. The argillite lies between claystone and shale in terms of hardness.

The Brunswick Formation consists of red to brown, fine- to coarse-grained quartzose and sandstone with red shale interbeds. This formation ranges from 9,000 to 16,000 feet in thickness in the county.

Sampling to Date

Sampling of monitoring well nos. 5, 6, 7 and 8 is conducted on a quarterly basis, and on an annual basis with an expanded list of parameters. The Occidental Chemical Company generally splits samples with the Pennsylvania Department of Environmental Resources (PA DER).

The proposed sampling locations include:

- Seven shallow, on-site monitoring wells, including well nos. 5, 6, 7, 8, 16, 19, and 24, will be sampled in accordance with WPSI-1, Rev. 1, Sections 8.4.3 and 8.4.3.2.
- One sulfate lagoon well and the 4 deep monitoring wells will be sampled in accordance with WPSI-1, Rev. 1, Sections 8.4.3 and 8.4.3.2.
- A sample of the sedimentation pond on the active landfill, both aqueous and sediment, will be taken in accordance with WPSI-1, Rev. 1, Sections 8.4.2, and 8.4.4.
- A sample of ponded water and sediment at the toe of the landfills will be taken in accordance with WPSI-1, Rev. 1, Sections 8.4.2. and 8.4.4.
- Samples of production well nos. 5, 8, and 10 will be taken in accordance with WPSI-1, Rev. 1, Section 8.4.3.

- o A background soil sample will be taken in accordance with WPSI-1, Rev. 1, Section 8.4.5.

- o The inactive seepage lagoon no. 1 will be sampled in accordance with WPSI-1, Rev. 1, Section 8.4.5.1, method 2.

The number of projected samples to be obtained is 18 aqueous and 6 solids, including blanks and duplicates. Sample analysis will be performed for organics and inorganics tasks 1 and 2, and task 3 for cyanide. Split samples will most likely be requested by the Occidental Chemical Corporation.

Richard Callahan has been appointed Team Leader and will be responsible for the sampling plan.

Please endorse below and return with your approval or amendments to this plan. If you have any questions, please feel free to contact either Thomas Fromm or me.

Respectfully,

Garth Glenn
Manager, FIT III

Thomas Fromm
Assistant Manager

Bruce R. Pluta
Quality Assurance

GG/rmk

Approved by: Laura A. Boornazian

Date: September 23, 1985

Amendments: Would prefer more samples of the inactive lagoons, aqueous + sediment - or if dry, auger samples about 1ft. deep taken in lagoon surfaces. Samples from all 4 if different lagoons were used for different purposes. If all are basically same, samples from 2 or 3 should be adequate.